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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tsuyoshi Koike

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WOODCOCK WASHBURN LLP  
ONE LIBERTY PLACE, 46TH FLOOR  
1650 MARKET STREET  
PHILADELPHIA, PA 19103

EXAMINER

KURR, JASON RICHARD

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/502,143	Applicant(s) BREEBAART, DIRK JEROEN	
	Examiner Corey P. Chau	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/11/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 4 discloses, "comparing the ratio to the threshold", which is unclear to the examiner what "the threshold" in the claim is referring to in order to be compared with the ratio.

4. Claim 5 discloses, "the threshold is substantially equal to or above the ratio obtained for a sinusoid signal", which is unclear to the examiner what is "**the ratio** obtained for a sinusoid signal".

5. Claim 7 discloses "attenuation of the signal maximum in proportion to the ratio", which is unclear to the examiner what is "the ratio" in the claim is referring to.

### ***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With regards to Claim 10, Section 101 of title 35, United States Code, provides:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 10 discloses "A computer program". Computer programs claimed as computer listings per se, i.e. the descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. Since a computer program is merely a set of instruction capable of being executed by a computer, the computer itself is not a process.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, and 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4856068 to Quatieri, Jr. et al. (hereafter as Quatieri).

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10. Regarding Claim 1, Quatieri discloses a method of decreasing the dynamic range of a signal comprising the steps of:

determining a property of the signal (c) (Figs. 1-3; column 3, line 47 to column 4, line 14),

determining a limitation parameter (s) based on the property of the signal (Figs. 1-3; column 3, line 47 to column 4, line 14),

limiting the signal by means of the limitation parameter, clipping the limited signal (Figs. 1-3; column 3, line 47 to column 4, line 14; column 5, line 64 to column 6, line 16).

11. Regarding Claim 2, Quatieri discloses determining the property of the signal:

windowing of the signal (Figs. 3; column 3, line 47 to column 4, line 24),  
determining of the ratio of the signal maximum within the window and the signal RMS value within the window (abstract; Figs. 3; column 3, line 65 to column 4, line 14; column 4, lines 44-50).

12. Regarding Claim 6, Quatieri discloses the ratio is modified by a correction factor (K) and the limitation parameter is determined based on the modified ratio (Fig. 3; column 3, line 47 to column 4, line 14; column 5, line 8 to column 6, line 16).

13. Regarding Claim 7, as best understood with regards to the 112, 2<sup>nd</sup> problem mentioned above, Quatieri discloses determining the limitation parameter based on the property:

determining of the signal maximum within the window (abstract; Figs. 3; column 3, line 65 to column 4, line 24; column 4, lines 44-50),

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attenuation of the signal maximum in proportion to the ratio (Fig. 3; column 3, line 47 to column 4, line 14; column 5, line 8 to column 6, line 16),

filtering of the attenuated maximum (Fig. 3; column 3, line 47 to column 4, line 14; column 5, line 8 to column 6, line 16),

calculation of the limitation parameter by dividing the maximum (M) of the dynamic range by the filtered maximum (Fig. 3; column 3, line 47 to column 4, line 14; column 5, line 8 to column 6, line 16),

if the filtered maximum is above the maximum of the dynamic range (Fig. 3; column 3, line 47 to column 4, line 14; column 5, line 8 to column 6, line 16).

14. Claim 8 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1.

15. All element of Claim 9 are comprehended by Claims 1 and 8. Claim 9 is rejected for the reasons stated above apropos to Claims 1 and 8.

16. Claim 10 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1.

### ***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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18. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4856068 to Quatieri.

19. Regarding Claim 3, Quatieri does not expressly disclose no clipping is performed when the ratio is below a predefined threshold. However, the examiner takes Official Notice that it is well known in the art that clipping is performed when the ratio is above predefined threshold in order to prevent louder section of the sound from overwhelming the processing and possibly damaging the transducer. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Quatieri to have clipping performed when the ratio is above predefined threshold in order to prevent louder section of the sound from overwhelming the processing and possibly damaging the transducer.

20. Claim 4 is essentially similar to Claim 3 and is rejected for the reasons stated above apropos to Claim 3.

21. All element of Claim 5 are comprehended by Claim 3. Claim 5 is rejected for the reasons stated above apropos to Claim 3.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5724433 to Engebretson et al. discloses an adaptive gain and filtering circuit for a sound reproducing system.


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23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 2, 2006  
CPC

  
VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
EBC/NOV CENTER 2600